



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/613,527	07/10/2000	Hiroaki Sudo	JEL 31211	9543

7590 02/11/2004

Stevens Davis Miller & Mosher LLP
Suite 850
1615 L Street NW
Washington, DC 20036

EXAMINER

SEFCHECK, GREGORY B

ART UNIT	PAPER NUMBER
----------	--------------

2662

10

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/613,527

Applicant(s)

SUDO, HIROAKI

Examiner

Gregory B Sefcheck

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8, 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2662

DETAILED ACTION

- The Applicant's Amendment filed 12/10/2003 is acknowledged.
- Claims 1-7 are pending.
- New Abstract is acknowledged. Previous objection withdrawn.
- Description of Drawings is acknowledged. The previous objection is withdrawn and the drawings are acceptable and approved.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Miya (US006175558B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any

Art Unit: 2662

invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

- In regards to Claim 1 and 3-7,

Referring to Figs. 4 and 7, Miya discloses a CDMA apparatus and method for transmitting and receiving a multiplexed signal having a plurality of signals and a known signal (claim 3/7 - receiver/reception method for receiving a multiplexed signal having a plurality of signals and a known signal; claim 4 - communications terminal apparatus comprising the transmitter and receiver). Miya discloses that such an apparatus can be used in radio communication between a base station and a mobile station provided with such transmitting and receiving capabilities (Col. 10-11, lines 66-5; claim 5 - base station apparatus in radio communication with communication terminal apparatus).

The apparatus and method comprising spreaders 103-1/403-1 through 103-N/403-N () for spreading and de-spreading transmission data signals 1-N using different spread codes 1-N (Col. 4, lines 30-32; claim 1/6 - transmitter/transmission method having first spreader/spreading step for spreading a plurality of transmission signals using different codes; claim 3/7 - first demodulator/demodulating step for de-spreading the plurality of signals using the transmission spreading code).

Art Unit: 2662

Also shown is a second spreader/spreading step 103-0 using a different spreading code 0 (Col. 5, lines 13-17) used to spread and de-spread a pilot signal (known signal; claim 1/6 - second spreader/spreading step for spreading a known signal with a different code; claim 3/7 - second demodulator/demodulating step for de-spreading the known signal).

Multiplex circuit 106 multiplexes the spread signals before transmission (Col. 1, lines 16-25, 38-45; claim 1/6 - transmitter/transmitting step for transmitting after multiplexing spread signals using FDM)

Miya further shows a line condition inference circuit 406 (phase error detector/detecting step) which infers phases (residual phase error) of the received signal using the received PL signal and the period of the PL signal (Col. 5/6, lines 55-5; claim 3/7 - phase error detector/detecting step using known signal and received known signal to detect residual error).

A synchronous detection circuit 407 (phase compensator/compensating step) is also disclosed that uses the phase information (residual phase error) inferred from the PL signal to synchronize (phase compensate) each of the plurality of transmission signals (Col. 6, lines 1-5; claim 3/7 - phase compensator/compensating step for each reception signal using residual phase error).

Art Unit: 2662

- In regards to Claim 2,

Miya discloses a CDMA transmitting apparatus that covers all limitations of the parent claim.

Miya discloses a PL signal (known signal) that is transmitted in a strong electric power compared to a channel transmitting other information data (Col. 2, lines 8-11; Col. 6, lines 39-57; claim 2 - known signal's signal level is higher than level of transmission data signals).

Response to Arguments

3. Applicant's arguments, see pg. 11, filed 12/10/2003, with respect to the rejections of claim(s) 1-4, 6, and 7 under 35 USC 103(a) over Miya and to the rejection of claim 5 under 35 USC 103(a) over Miya in view of Sunaga have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Miya under 35 USC 102(e).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Unno (US006519244B1) discloses a CDMA transmitter capable of reducing transmission power

Art Unit: 2662


- Park et al. (US006442152B1) discloses a device and method for communicating packet data in mobile communication system
- Ozluturk et al. (US006366607B1) discloses processing for improved performance and reduced pilot

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B Sefcheck whose telephone number is 703-305-0633. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

GBS
1-28-2004


HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600